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GROUNDWATER INFORMATION SUMMARY SHEET
U.S. EPA REGION VII

1. Project name/location: Parker-Hannifin Corporation, Automotive Connectors Division, Kennett, Missouri

5. Description of affected geology/hydrology:

Parker-Hannifin is located a few miles east of the St. Francis River, and is underlain by alluvial deposits of the Mississippi River delta. The Dunklin County Soil Survey indicates that the facility is situated predominantly on Dubbs silt loam; Beulah fine sandy loam is found in the northern portion of the site. Dubbs soils are characterized by moderate permeabilities, and Beulah soils have rapid permeabilities. The topography of the area in which Parker-Hannifin is located is extremely flat. Well boring logs indicate that sediment underlying the facility is predominantly fine to very fine sand, with occasional clay and gravel. No information is available concerning an underlying confining unit, although a 14 February, 1986 Comprehensive Groundwater Monitoring Evaluation (CME) stated that an aquitard may be located at 60, and possibly over 100, feet depth.

Groundwater is encountered from 10 to 25 feet below the ground surface, and appears to flow to the southeast with a gentle hydraulic gradient (.0006). Currently, four monitoring wells and seven observation wells exist at the site.

6. Anticipated effect(s) on groundwater:

Statistically significant t-test results for pH and specific conductance were reported in July 1984. Re-sampling not only confirmed these findings, but indicated statistically significant pH and TOX results at the facility's upgradient well. During two 1985 inspections by the Missouri Department of Natural Resources, small rips in the surface impoundment's rubber liner were noted. It appears that any interaction between groundwater and surface impoundment wastes permitted by the liner tears would be minimal, due to the fact that a one-foot thick bentonite layer exists below the rubber liner. In addition, the highest groundwater elevation recorded at the facility is ten feet below the ground surface, but the surface impoundment is only six feet deep. The facility is currently in assessment, and has proposed closing the surface impoundment. Parker-Hannifin's closure plan had not been approved as of 25 November, 1985.

7. Potential effect(s) on groundwater:

No data is available concerning water wells in the vicinity. No hydraulic conductivity tests have been performed at the facility, but the moderate to high permeabilities of the surficial materials would permit fairly rapid pollutant transport. It is unclear whether the potential for flooding has been evaluated, although topographic map analysis indicates that levees flank the St. Francis River. If surface impoundment wastes were distributed over the ground surface by flood waters, the likelihood for contaminant migration

to groundwater would appear to be reasonably high.

8. Comments:

This summary was prepared from documents obtained at the Missouri Department of Natural Resources, and should be interpreted as preliminary based on the fact that more recent data may exist concerning Parker-Hannifin which were not available to GCA's reviewer.

Date of review: 30 April 1986